## Results and Discussion

The data analysed are presented in table 1. The regression lines based on the angle of the tangent are presented in Fig. 1, where the growth rate of various parameters are shown. The regression lines reveal that the total length has the fastest growth followed by the fork length. Snout to second dorsal grows faster than the snout to anal. A comparison of the relative growth of the fins shows that the first dorsal lobe grows faster than the pelvic fin, second dorsal lobe and pectoral fin.

The rate of growth of head length falls between depth dorsal and depth anal. Eye diameter recorded the slowest rate of growth, the second least being the snout length.

## Acknowledgements

I am greatly indebted to Professor R. V. Seshaiya (Retired Director, C.A.S. in Marine Biology, Annamalai University, Porto Novo) for facilities and advice and to Dr. M. S. Prabhu, Scientist, National Institute of Oceanography, Panjim, Goa, for going through the manuscript and offering helpful suggestions.

Dept. of Zoology,
A. RAHIM

The New College,
Madras-600 014,
April 27, 1973.

## 9. ON THE OCCURRENCE OF A RECORD SHOAL OF RED SNAPPER LUTIANUS ARGENTIMACULATUS FORSKAL OFF COCHIN

Landings of perches are common along the east coast of India eventhough they appear sporadically along the west coast. However, it is of interest to record a shoal of 170 Red Snapper Lutianus argentimaculatus Forskal weighing 1141 Kg which were caught off Cochin by the vessel ' Blue Fin 93', training-cum-fishing vessel of the Central Institute of Fisheries Operatives, Cochin.

The fishes were caught by the vessel on 31st January 1972 when she was on her 142nd voyage at a depth of 25 m between 0830 and 1015 hrs in a single haul. The weight of the specimens ranged between 7 to 10 Kg and were 51 to 63.5 cm in length. The most interesting feature which needs special mention is that eventhough the vessel operated the same gear ( 450 meshes Trawl-Garfil) in the same ground and at the same depth and made five hauls, not a single specimen was caught in the other four
hauls. The skipper of the vessel confirmed that this is the first time that such a shoal of Red Snapper was caught by the vessel. There seems to be no record of occurrence of such large shoals of this particular species around Cochin waters.

The sea bottom at the fishing grounds was predominantly muddy with plenty of shells. Other varieties of fishes which were found with the catch were Sharks, Skates and Rays ( 20 Kg ), white fish ( 2 Kg ), small carangids ( 3 Kg ), small jew fishes ( 3 Kg ), flat fishes ( 5 Kg ), Barracuda $(3 \mathrm{Kg})$, Cat fishes $(100 \mathrm{Kg})$ and Sand lobsters $(3 \mathrm{Kg})$.

The catch/hr for Red Snapper, at this ground worked out for this particular haul to $652 \mathrm{Kg} / \mathrm{hr}$.

## Acknowledgements

Thanks are due to Shri M. C. Perumal, Director, Central Institute of Fisheries Operatives, Cochin, for his encouragement and permission to publish this note. Thanks are also due to Shri K. Balan, Skipper and crew of the vessel for the keen interest shown for recording the details of operation.

Central Institute of Fisheries Operatives, Cochin-16, June 2, 1972.
V. NARAYANA PILLAI
V. S. RAMACHANDRAN

## 10. A PARTIAL AMBICOLORATION IN THE INDIAN HALIBUT PSETTODES ERUMEI (BLOCH) (PSETTODIDAE : PLEURONECTIFORMES) FROM PORTO NOVO, S. INDIA

## (With a text-figure)

Ambicoloration or pigmentation on the blind side of the flat fishes is ${ }^{\circ}$ said to be associated with the tendency to regain bilateral symmetry (Norman 1934) ${ }^{1}$.

On 19th February, 1971, an ambicolorate specimen (Fig. 1) of the Indian halibut Psettodes erumei (Bloch) (Psettodidae) was caught in a commercial catch of 17 normal specimens of the same species was made at Porto Novo. This is the first time that an ambicolorate specimen has been collected from this area. The specimen measuring 312 mm in total length, is normal on its ocular side. On the blind side, however,

[^0]
[^0]:    ${ }^{1}$ Norman, J. R. (1934) : A systematic monograph of the flat fishes. (Heterostomata) I. pp.22-27. London.

